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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/573,148

12/21/2006

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EXAMINER

WYSZOMIERSKI, GEORGE P

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

12/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,148	Applicant(s) JOHNSON ET AL.	
	Examiner George P. Wyszomierski	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☒ Claim(s) 18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/16/07</u> . | 6) <input type="checkbox"/> Other: ____. |

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1. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, line 2, the term "the cast alloy" lacks proper antecedent basis. Claims dependent on claim 1 are likewise rejected under this statute.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 7, 8, 12-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martis (U.S. Patent 5,340,413) or over Yoshizawa (U.S. Patent 7,141,127).

The prior art discloses iron-base alloys including an amorphous matrix (Martis) or a nanocrystalline matrix (Yoshizawa). The prior art alloys include an fcc phase; see Martis column 5, lines 19-22, or Yoshizawa column 8, lines 44-51 or column 10, lines 49-55. With respect to claims 2-4, the prior art materials are made by casting a material that is substantially amorphous and then heat treating to develop nanocrystalline phases, so at some point the prior art alloys would be substantially amorphous or substantially nanocrystalline as set forth in the instant claims. Further, at some point in such a process, the percentage of the matrix would be as defined in claim 5. The alloys may contain elements in percentages as recited in claim 7, and with regard to claims 12-15 may contain 0% of the recited elements, i.e. an amount "up to"

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the maximum amounts recited in those claims. With respect to claim 8, the fcc phase recited in column 5, lines 19-22 of Martis does not contain any of the recited elements and thus it can be assumed that the percentage of those elements is higher in the matrix. In Yoshizawa, the fcc phase appears to be a Cu or Au base phase, also not containing any of the recited elements and similarly leaving those elements in the matrix phase.

The prior art does not specify materials "castable into 3-dimensional bulk objects" as recited in claim 1 or "three dimensional shape having a measurement of at least 0.5 mm in each dimension" as recited in claim 17. The examiner's position is that one of ordinary skill in the art would have easily been able to form products of the shapes as presently claimed from the materials as described in the prior art, using standard casting apparatus and equipment as generally employed by skilled metallurgists. Thus, the disclosures of Martis or of Yoshizawa are held to create a prima facie case of obviousness of the presently claimed invention.

4. The remainder of the prior art cited on the attached PTO-892 and 1449 form is of interest. This art is held to be no more relevant to the claimed invention than the art as applied in the rejections supra. The Koch et al. article, listed under "Other Documents" on the 1449 form, has been crossed out because no copy of this document is of record as required by 37 CFR 1.98(a)(2).

5. Claims 6, 9-11, 16 and 18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art does not disclose or suggest materials as claimed and which have a dendritic fcc phase

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as in claim 6, a composition as recited in claims 9 and 10, or an fcc phase having a particle size as recited in claims 16 and 18.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/George Wyszomierski/
Primary Examiner
Art Unit 1793

GPW
December 15, 2008